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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER HO, THOMAS M	
			ART UNIT	PAPER NUMBER
			2134	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/441,081

Applicant(s)

SATO ET AL.

Examiner

Thomas M. Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 5/6/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-5, 16 are pending.

Response to Arguments

2. The Examiner previously had allowed claims 1-6 and 16 on the basis that they recited a unit configured “to store user-defined arithmetic formulas associated with respective users”

However upon further analysis, the Examiner has uncovered that Pegg does indeed disclose this limitation. Pegg(Column 4, lines 68 – Column 5, line 2) recites

“A user may also design a customized algorithm and have the authorization center store it in the algorithm pool”

Thus the algorithms may be “user-defined”. For this reason, the Examiner has not allowed claims 1-5, 16 and has left further prosecution of the claims open under the new grounds of rejection.

Examiner's Comment

The Examiner has also noted the language of claim 2 are reciting:

“matching unit utilizes a predetermined number as said value in response to determination that said value is impossible to calculate based on the random digits and said one of the arithmetic formulas.”

The Examiner has interpreted the phrase “impossible to calculate” as intractable or difficult to calculate rather than something that is truly impossible to calculate as would be commonly interpreted by those skilled in the art.

If a number is determined as truly impossible to calculate, such a recitation would be cryptographically significant, and would raise issues under 35 USC 112 first paragraph and/or 35 USC 101.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pegg.

In reference to claim 1:

Pegg discloses an apparatus for checking user identification:

- An arithmetic-formula storing unit(Figure 1, Item 8) configured to store user-defined arithmetic formulas (Column 4, lines 68 – Column 5, line 2) associated with respective users(Figure 1, Items 116, 104), the arithmetic formulas defining calculation of variables

(Column 4, lines 48-67) that are assigned to respective digital positions arranged on a display screen,

- A matching unit (Column 5, lines 3-8, 50-65) configured to retrieve from said arithmetic-formula storing unit one of the arithmetic formulas (Column 5, lines 40-50) corresponding to a user identifier in response to the user input of the user identifier and an identification-purpose number (Column 5, lines 33-45), to calculate a value of said one of the arithmetic formulas by assigning the random digits to said one of the arithmetic formulas (Column 5, lines 40-52), to compare the value with the identification-purpose number, and to authenticate the user in response to a match therebetween. (Column 5, lines 50-63)

Pegg fails to explicitly disclose a display unit configured to display random digits at the respective digit positions arranged on the display screen when a user logs in. and the arithmetic formulas defining calculation of variables that are assigned to respective digital positions arranged on a display screen.

The Examiner takes official notice that such a display of the information in respective digit positions arranged across a display screen was well known in the art at the time of invention. Pegg already discloses the actual information that is displayed to the screen, but does not disclose that it is displayed to the screen in the manner claimed by the applicant.

It would have been obvious to one of ordinary skill in the art at the time of invention to display the algorithm and formula information to the user in order to give the user the convenience of

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seeing the question posed to him/her as well as allowing him/her the visual stimuli to be able to see what he/she was entering.

In reference to claim 2:

Pegg (Column 5, lines 3-8, 50-65) discloses the apparatus as claimed in claim 1, wherein said matching unit utilizes a predetermined number as said value in response to determination that said value is impossible to calculate based on the random digits and said one of the arithmetic formulas, where the value that is difficult or intractable to calculate is the value that is computed using the random value dynamic variables of the particular algorithm. (Column 5, lines 45-60)

In reference to claim 3:

Pegg (Column 4, lines 47-67) discloses the apparatus as claimed in claim 1, wherein the variables include information about a date and time at which an identification process is performed, where the information regarding date and time is an environmental variable.

In reference to claim 4:

Pegg discloses an apparatus for checking user identification, comprising:

- A user authentication card(Column 5, lines 15-25)
- A matching unit configured to calculate a value of the arithmetic formula by assigning the random digits, to compare the value with an identification-purpose number entered by the user, and to authenticate the user in response to a match therebetween. (Column 5, lines 40-63)

Pegg fails to disclose:

- a user authentication card configured to store a user-defined arithmetic formula, the arithmetic formula defining calculation of variables that are assigned to respective digital positions arranged on a display screen; Pegg discloses that the user authentication card contains an account ID.

Pegg discloses however that a storage means contains the algorithm formulas to be used (Column 6, lines 53-61) and that these storage means may be storage devices at multiple locations accessible by the computing unit.

Pegg also depicts the card which stores the user ID as having a storage medium. (Column 6, lines 35-37)

The Examiner takes official notice that it was well known to those of ordinary skill in the art to store information such as a formula or algorithm into a storage medium.

Pegg also fails to explicitly disclose a display unit configured to display random digits at the respective digit positions arranged on the display screen when a user logs in.

The Examiner takes official notice that such a display of the information in respective digit positions arranged across a display screen was well known in the art at the time of invention.

For example ATM machines implement the step of displaying information in respective digit positions across a display screen. Pegg already discloses the actual information that is displayed to the screen, but does not disclose that it is displayed to the screen in the manner claimed by the applicant.

It would have been obvious to one of ordinary skill in the art at the time of invention to display the functional information to the user on a screen and store the user specific algorithm to the card where the user will manage his or her own personal information which will sidestep having to deal with the issue of storing all the user's algorithms and account information which will result in greater complexity.

In reference to claim 5:

Pegg discloses the device as claimed in claim 4, further comprising a registration/updating unit which updates one of the user-specific formulas in the control-data unit with a user-entered formula only if the user entering the user-entered formula proves knowledge of said one of the user-specific formulas by entering one of the user-specific formulas, where the user proves knowledge of the user-entered formula by logging in computing the access code using the previous formula and dynamic variable information. (Column 5, lines 24-32) & (Column 4, lines 48- 67) & (Column 5, lines 50-63) After the user has proved knowledge of the formula by successfully logging in, the user may update the formula (Figure 2b) or may enter a new one completely. Pegg(Column 4, lines 68 – Column 5, line 2)

In reference to claim 16:

Pegg fails to specifically disclose an apparatus where when the user enters a wrong user-entered value, the user is allowed to enter a new user-entered value in response to at least one new randomly generated number being presented to the user.

The Examiner takes official notice that re-entering a value after a user wrongfully entered the previous value was well known in the art at the time of invention. Additionally Pegg in item 250, Figure 2a, discloses that the user is denied access. It would have been obvious to allow the user to restart the process at (Figure 2a, Item 200).

It would have been obvious to one of ordinary skill in the art at the time of invention to allow a user to re-entered a new value if the previous value was incorrectly entered, in order to ultimately provide the user access, even when the user mistakenly entered a wrong value.

Conclusion

5. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (571)272-3838.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

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TMH

July 23rd, 2005

David Y. Jung
Primary Examiner

7/24/05
D.Y. Jung